

## ABSTRACT

An A pirani absolute pressure sensor for sensing absolute pressure in a load lock in a range from 100 to  $10^{-4}$  torr and a differential pressure sensor for sensing a pressure difference between ambient atmospheric pressure and pressure in [[a]] the load lock chamber are combined together ~~on~~in a module with a manifold[[,]] and ~~with~~ common circuit components to provide a pressure transducer apparatus~~that is~~ capable of producing not only analog output for absolute pressure measurements, but also control signals over a wide pressure range at settable absolute and differential pressure values for opening interior and exterior doors of a load lock used to shuttle wafers and other devices into and out of a vacuum processing chamber. The transducer can also produce signals to control transition from slow to fast vacuum ~~pump-down pumping~~ of [[a]] the load lock chamber pressure at a ~~predetermined~~a settable threshold pressure set point.